

PATENT COOPERATION TREATY



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

524,782

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2002P13033WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DE2003/002631	International filing date (day/month/year) 05 August 2003 (05.08.2003)	Priority date (day/month/year) 19 August 2002 (19.08.2002)
International Patent Classification (IPC) or national classification and IPC G06F 17/30		
Applicant SIEMENS AKTIENGESELLSCHAFT		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 16 January 2004 (16.01.2004)	Date of completion of this report 11 February 2005 (11.02.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

I. Basis of the report**1. With regard to the elements of the international application:***

- the international application as originally filed
 the description:

pages _____ 1, 3-19 _____, as originally filed
 pages _____, filed with the demand
 pages _____ 2, 2a _____, filed with the letter of 15 September 2004 (15.09.2004)

- the claims:

pages _____ 1-18 _____, as originally filed
 pages _____, as amended (together with any statement under Article 19)
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

- the drawings:

pages _____ 1/4-4/4 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

- the sequence listing part of the description:

pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
 the language of publication of the international application (under Rule 48.3(b)).
 the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
 filed together with the international application in computer readable form.
 furnished subsequently to this Authority in written form.
 furnished subsequently to this Authority in computer readable form.
 The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages _____
 the claims, Nos. _____
 the drawings, sheets/fig _____

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-18	YES
	Claims		NO
Inventive step (IS)	Claims	1-18	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims		NO

2. Citations and explanations

- Reference is made in the present report to the following search report citation D1; the same numbering will be used throughout the procedure.

D1: WO 01 18633 A (CARPENTER PAUL R; TEUGELS TOM (BE); FILEPOOL N V (BE); RIEL JAN F) 15 March 2001 (2001-03-15)

- Document D1 is considered the prior art closest to the subject matter of claim 1. It discloses (the references in parentheses are to D1) the following features:

device with a memory device (page 39, lines 16-21) for storing a file directory structure with at least one first hierarchical level and one second hierarchical level, which is subordinate to the first hierarchical level, with at least one first file directory located on the first hierarchical level, with at least one second file directory located on the second hierarchical level and with at least one first file located on one of the two hierarchical levels or on a lower hierarchical level (page

16, lines 21-29; page 17, lines 6-10; figure 5), characterized in that

the file directory structure is saved in a second file (page 16, lines 21-24), said file directory structure representing part of the content or the entire content of the second file (page 17, line 11; page 17, line 31; page 19, lines 26-32), each file directory and each file of the file directory structure being listed consecutively in the second file and being identified by at least one characteristic start symbol and/or at least one characteristic end symbol (page 20, lines 4-5; figure 6A).

2.2. The subject matter of claim 1 thus differs from the known document D1 by the feature that

- the contents of each file directory and each file of the file directory structure are stored between their respective two characteristic symbols.

Therefore, the subject matter of claim 1 is novel (PCT Article 33(2)).

2.3. The problem to be solved by the present invention can be seen as the following:

- transmitting the contents of a file directory structure in a compact manner.

The solution to this problem, which is defined by claim 1, is not known from or suggested by the prior art.

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Therefore, the subject matter of claim 1 is considered inventive (PCT Article 33(3)).

3. Independent claim 17 refers to a system with a device according to claim 1.

Therefore, the subject matter of claim 17 is likewise considered novel and inventive (PCT Article 33(2) and (3)).

4. Independent claim 18 describes a device for carrying out the method according to claim 17 and is therefore novel and inventive.
5. Claims 2-16 are dependent upon claim 1 and thus likewise satisfy the PCT requirements with respect to novelty and inventive step.

(Uniform Resource Locator), and these URLs use a hierarchical structure for addressing as provided by file systems, objects that are located on such embedded systems cannot be readily addressed. On the other hand, however, there is a requirement for remote access to 5 these automation devices or embedded systems, since they normally operate at a distance and are unattended. Remote operation or remote configuration, e.g. in the event of errors, for maintenance purposes, etc., can reduce the presence of personnel on site and is therefore cost-effective. In order to satisfy this requirement, file 10 systems are now being post-implemented at considerable cost, and files then exist as independent storage blocks, for example, which have to be managed e.g. via the so-called FTP service (File Transfer Protocol). In addition to the problem that the management of such individual storage blocks is very burdensome, it is normally also 15 necessary additionally to implement such an FTP server on the embedded system, thereby further reducing the resources on the target machine. Moreover, automation systems which are protected by firewalls are not necessarily open to an FTP server, and remote access is therefore obstructed in some cases.

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The present invention addresses the problem of specifying an apparatus which allows an implementation of a file directory structure primarily on embedded systems or automation devices which do not necessarily have a local file directory structure.

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This problem is solved by means of an apparatus including a storage for storing a file directory structure, said file directory structure having at least one first hierarchy level and one second hierarchy level which is developed as a subordinate level of the 30 first hierarchy level, having at least one first file directory which is situated on the first hierarchy level, having at least one second file directory which is situated on the second hierarchy

**REPLACED BY
ART 34 AMDT**

2a

Aufgabe der vorliegenden Erfindung ist es, eine Vorrichtung anzugeben, die eine Implementierung einer Dateiverzeichnisstruktur vor allem auf Embedded Systemen bzw. Automatisierungsgeräten auch ohne eigene Dateiverzeichnisstruktur ermöglicht.

Diese Aufgabe wird durch eine Vorrichtung mit einem Speicher zur Speicherung einer Dateiverzeichnisstruktur mit wenigstens einer ersten und einer zweiten Hierarchieebene, welche als untergeordnete Ebene der ersten Hierarchieebene ausgebildet ist, mit wenigstens einem ersten Dateiverzeichnis, das sich auf der ersten Hierarchieebene befindet, mit wenigstens einem zweiten Dateiverzeichnis, das sich auf der zweiten Hierar-